

LCN

Overhead-Floor-Surface
DOOR CLOSERS

**LCN THE COMPLETE LINE OF CONCEALED AND
SURFACE DOOR CLOSERS FOR EVERY PURPOSE**

A FEW DOOR CLOSER PRINCIPLES

*Which Explain Why LCN Door Closers
Work So Well and Last So Long*

What to Look for in a Door Closer

Judging the quality and performance of a door closer is very simple. There are four cardinal points to consider:

A. *Opening*—The closer should offer as little resistance as possible to the opening of the door, and should not perceptibly increase this resistance as the door reaches the end of its opening swing (see diagram at left).

B. *Closing*—The closer should close the door exactly as desired, complete control being maintained over the entire action. There should be no abrupt retardation as the door passes from the long closing arc (1) to the latching arc (3); instead, the speed should change gradually through a transition arc (2).

C. *Adjustment*—In order to take care of the variable conditions of service (such as winds and drafts) the closer should be responsive to fine adjustment; and once adjusted, it should stay adjusted.

D. *Durability*—The closer should be designed and built to provide ample power with the least friction and the least tendency to develop "play" and wear at vital points, thus insuring long life.

How and Why LCN Closers Give Superior Results

In the standard surface type closer, shown in sectional views at the right, is found the typical LCN mechanism, evolved through fifty years of development and made the basis of the entire LCN line.

The remarkable success of this closer rests on certain basic features built into the device. Among these are:

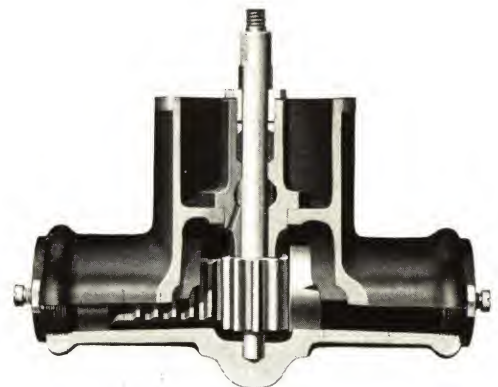
1. The "power plant," an extra large coil spring (not shown) made purposely oversize, of special analysis steel, which occupies the upper part of the shell surrounding the shaft. The reserve power of this coil spring insures smooth, flexible operation and long spring life.

2. Full rack and pinion checking mechanism, providing complete control of the door at all times. This is highly important for smooth operation and for protection of door, hinges and closer against the constant shocks which increase wear. Note how the double-headed piston is geared to the shaft, eliminating any "dead center" position and giving continuous control. The full rack and pinion mechanism also allows the closer to be mounted on the door at ample distance from the hinge, for maximum leverage (power.)

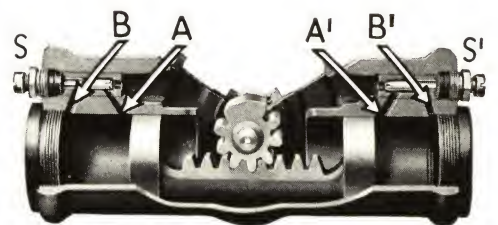
3. The leakproof shaft assembly, described in detail on opposite page. Rigidly cemented to the shell or cylinder diaphragm, the shaft housing prevents leakage of the checking liquid and development of play, which lead to destructive wear, and makes a practical unit of shaft, pinion, housing and shell.

4. A simple system of adjusting screws (S, S') and ports (A, A', B, B') and one in each piston head) by means of which the flow of liquid between the chambers of the checking cylinder, controlling the door operation, can easily be adjusted as desired. Swinging and latching speeds are adjusted separately, thus any kind of operation to meet a particular need can be quickly obtained. Transition from swinging to latching speed is accomplished by means of the "V" notch in the piston head, which allows the liquid to continue flowing at a *diminishing* rate until cut off by passage beyond port A or A', when the latching stage is entered.

5. Symmetrical design, with reversible spring, which means that the closer can be readily changed from right hand door operation to left, and vice versa, without affecting its efficiency.



Above: Sectional View of LCN Door Closer Showing Positions of Shaft Assembly and Piston



Above: Sectional View of LCN Door Closer Showing Relations of Piston, Shaft, Ports and Adjusting Screws

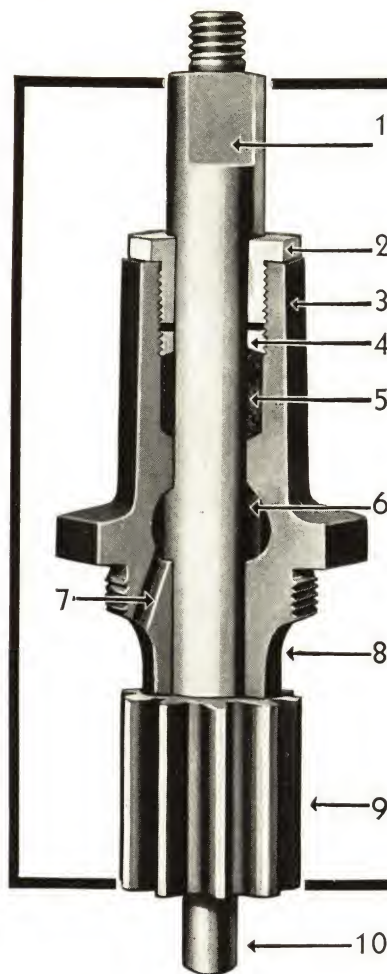
The LCN Rigid, Leakproof Shaft Assembly

There is no better evidence of the precision with which the LCN closer is built than the fact that leakage—the common fault of door closers—is entirely overcome in the LCN.

This common fault of door closers is due chiefly to the tendency of the packing to become loose as a result of the lateral thrust of the vertical shaft. This weakness has been transformed into a point of strength in the LCN closer. Note that the shaft (1) turns in four bearings with the packing located between two of these bearings. The packing (5) is held tightly against the shaft by the gland nut (4) which is entirely independent of the tobin bronze shaft bearing nut (2) which forms the upper bearing of the shaft. This makes the shaft of the LCN closer leakproof.

Note, also, that this entire assembly is screwed into the shell of the closer and is seated rigidly into the shell casting. As a result, lateral movement is impossible.

The entire thrust from the main arm is on this sturdy unit with its extra heavy shaft and four-bearing support. Contrast this with ordinary construction where the upper bearing is usually in the cover or ratchet-shell. With lateral thrust stopped, the packing in the LCN closer will remain tight for many years.



1. Shaft—Highly polished special steel, ground to one ten-thousandth of an inch.

2. Tobin Bronze Bearing—At point of greatest stress, secures amazing results in door closer efficiency.

3. Shaft Housing—When cemented to shell insures rigidity of shaft, consequently smooth operation of closer.

4. Gland Nut—Holds packing (5) firmly against shaft (1) and housing (3), and will last for life of closer.

5. Packing—Of graphited flax, located between two large bearings, to prevent side thrust and leakage.

6. Air Chamber—To destroy capillary attraction and thus normally to prevent liquid from reaching packing.

7. Oil Duct—To return to checking cylinder any liquid which might creep up shaft to air chamber.

8. Large Bearing—Sturdy; contributes greatly to closer's long life without perceptible wear.

9. Heavy Duty Gear—Accurately cut teeth; is riveted and keyed to shaft, making virtually one piece.

10. Bottom Bearing—Insures accurate meshing of gear and rack, therefore uniform motion in closing door.

THESE ARE THE DOOR CLOSER FACTORS WHICH MEAN IN PRACTICE

LONG LIFE
COMPLETE CONTROL
NO TROUBLE

The LCN Door Closer takes its name from the initials of Mr. L. C. Norton, who designed and brought it to its present high state of perfection, and who invented the first door check in 1877. From that first crude affair, made of a hand pump and a hinge (which none-the-less worked successfully for over a year in Trinity Church, Boston) to the extensive LCN line of modern door control devices is indeed "a long jump." But not accomplished by a jump! Out of vast accumulated experience and constant testing and experiment, to-day's products have come.

Made by an Organization of Door Closer Specialists

The LCN organization believes in concentrating its energies—in "doing one thing well." Therefore the entire time of the company's factory and home office personnel, and the facilities of a modern, well-equipped manufacturing plant, are devoted to the production of LCN door control devices.

Along with its policy of specialization the company insists upon standards of quality, in both materials and manufacture, as high as it is possible to make them. A door closer as a machine must

work under peculiar difficulties, subject to great strains and often to considerable abuse. Real economy, therefore, demands that only the best materials and the most exact methods be used in their production. This is the LCN creed.

GUARANTEE

When the proper size closers are installed as listed in our schedule of sizes, we positively guarantee the LCN Door Closers to operate efficiently for a period of two years.

NORTON LASIER COMPANY

General Offices and Factory

466 West Superior Street • Phone SUPERior 7108

CHICAGO, ILLINOIS

CABLE ADDRESS: "NORLASCO"

SURFACE DOOR CLOSERS FOR EVERY PURPOSE

THE LCN STANDARD SURFACE TYPE DOOR CLOSER

Product Nos. 110-115-116

Six Sizes—A to F—Furnished With or Without Hold-open Arm

Wherever mechanical performance is the chief, or only, requirement in a door closer; where low cost and genuine economy must rule; where the desire to improve a building's appearance by concealing the door closers must give way to the foregoing considerations, the LCN Standard Surface Type Door Closer is the thing to specify.

Every requirement of the job of door control has been fully met in this closer. Every difficulty encountered in former years has been overcome. The resulting product is as nearly perfect in operation, and as nearly fool-proof and trouble-proof as a door closer can be made. Hundreds of thousands in daily service throughout the country, with seldom a need for attention, are the best proof of this.

The mechanical features of construction and operation of this closer are explained and illustrated on pages two and three.



Above—LCN Closer with Regular Arm
Below—LCN Closer with Hold-open Arm

LCN HOLD-OPEN ARMS

Every closer-equipped door which is intended to be left standing open occasionally should have the closer with hold-open arm. Other devices such as hooks, wedges, chairs, etc., used for this purpose are likely to bend or warp the door. The hold-open arm, on the contrary, simply stops the closer and offsets its closing power at the source.

100-DEGREE HOLD-OPEN ARM

Product No. 123

Designed to hold door open at 100 to 140 degrees

This arm (illustrated at left) may be set to hold door open at any selected point between 100 and 140 degrees. It is a remarkably simple, strong, compact and effective device, having only five parts, including the arms of malleable iron. It works on the cam principle, with no springs or lugs to break or wear out. The holding head (shown in section at right) is located at the joint of the closer arms for highest efficiency. The arms are symmetrical; may be used either side up, either "hand," without change.



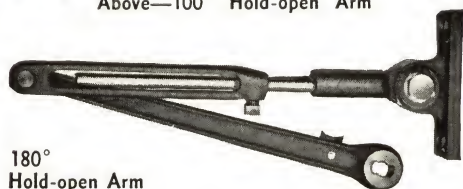
Hold-open Head in Cross Section



Above—100° Hold-open Arm

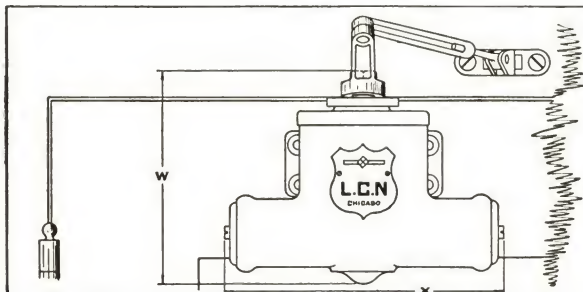
180-DEGREE HOLD-OPEN ARM Product No. 124

This hold-open arm (illustrated at left) is used where it is desired to hold open the door at some point between 140 and 180 degrees. Here a regular main arm is used, and the holding head is at the shoe. Closer must be mounted on a corner bracket. When ordering, specify size of butts.

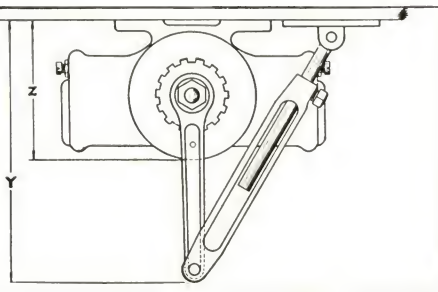


180°
Hold-open Arm

DIMENSIONS OF LCN SURFACE CLOSER



SIZE OF CLOSER	DIMENSIONS				
	W	X	Y	Z	
A	5	7	10½	3½	
B	5½	7½	11½	3½	
C	6½	8½	12½	4	
D	6½	8½	13½	4½	
E	7½	9½	14½	4½	



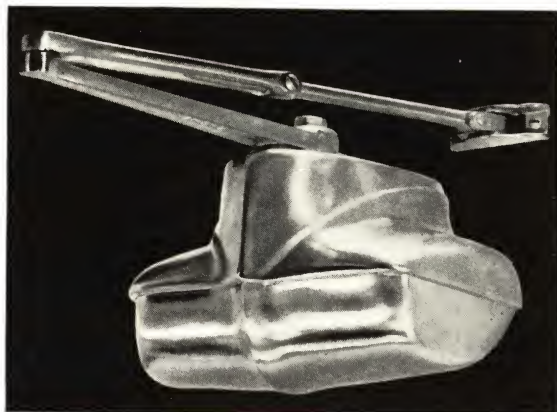
The LCN "Miracle"

TRADE MARK

NEW STREAMLINED DOOR CLOSER

16
26

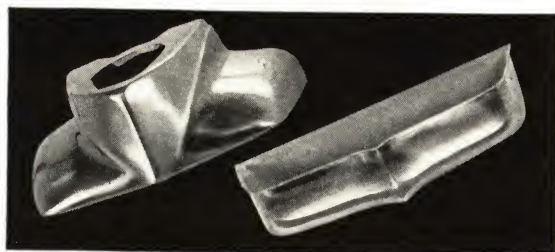
Product No. (See Note*)



An *outward transformation* of the standard LCN door closer into a form of genuine beauty. It may be used as part of the decorative trim, in polished metals, or blended into the background with a finish to match. The door closer is mechanically unchanged; so that the "Miracle" provides handsome design with the most reliable performance. (*In ordering closer complete with housing, combine product numbers, with size, as "C-110-128." For housing only, specify size, as "C-128.")

**. . . AND STANDARD LCN CLOSERS CAN BE QUICKLY
CONVERTED TO "Miracle" FORM**

Housing, Product No. 128

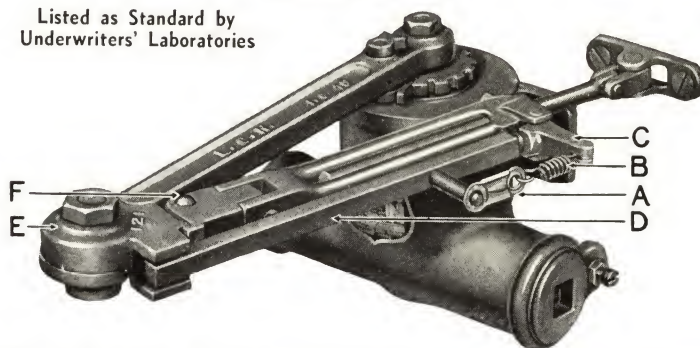


Any standard LCN surface type closer can be quickly converted to the new "Miracle" form, without taking it down from the door, by enclosing it in a "Miracle" housing of correct size, illustrated at left. (Size "C" first available; for other sizes consult dealer or factory). Thus modern beauty in the door closers may be had at small cost.

LCN HOLD-OPEN ARM CLOSER WITH FUSIBLE LINK

Product No. 114

Listed as Standard by
Underwriters' Laboratories



Here is the answer to the question: how to guard against the fire hazard of class A and other important openings and still keep to a minimum the special equipment needed. This thoroughly tested and approved closer has a simple, rapid action which cannot fail. When temperature at link (note proximity to door jamb, where hot air concentrates) reaches 160° link A fuses, breaks tension in spring B, throws back locking pawl C and releases control lever D. This frees closer by shifting action to secondary, free pivot F, and does NOT depend on unlocking the main holding head E. All this takes place instantaneously. Door is quickly and firmly closed. Closer then functions normally, allowing use of door by firemen or others; but door cannot be set open until another link is installed.

Hold-Open Arm with Fusible Link

Product No. 121

Listed as Standard by Underwriters' Laboratories

LCN standard closers, sizes C, D and E may easily be equipped with the Hold-open Arm with Fusible Link. Holds door open at 100 to 140 degrees. Universal, right or left hand, and cannot be applied wrong.

SIZES of LCN Door Closers

SIZE A—For screen, storm, and light interior doors.

SIZE B—For interior doors 2'8" x 7'0".

SIZE C—For interior doors 3'0" x 7'0" or light exterior doors 2'6" x 7'0".

SIZE D—For extra heavy interior doors and average 3'0" x 7'0" exterior doors.

SIZE E—For wide and heavy exterior doors.

SIZE F—For extremely heavy exterior factory or refrigerator doors.

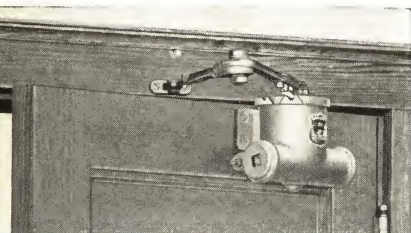
FINISHES of LCN Door Closers

PAINTED FINISHES—LCN Standard, Gold Bronze, Silver Bronze, Dead Black, Special Paint Finishes.

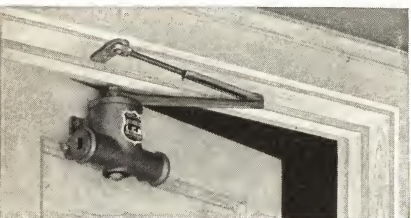
PLATED FINISHES—Bronze Plate, Unpolished; Bronze Plate, Polished; Nickel Plate, Unpolished; Nickel Plate, Polished; Statuary Bronze, Unpolished; Statuary Bronze, Polished; Genuine Bower Barff.

SPECIAL FINISHES—To match your sample submitted.

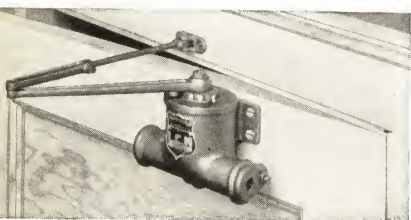
LCN *Special Purpose* DOOR CLOSERS



Hospital Type Closer



Parallel Arm Closer



Telephone Booth Closer

LCN is the only line of its kind supplying a hydraulic door closer for every type of swing door and every situation. The special purpose closers here described will take care of most demands. For unusual conditions consult the LCN main office. Our engineers will promptly work out the solution to your problem.

HOSPITAL TYPE CLOSER

Product No. 113

This is the LCN closer most widely used in hospitals. It is designed to hold the door open at any one of three points: approximately 6" from the jamb, at 45 degrees or at 100 degrees, depending on the way the holding head has been set.

When the closer is released from the set position, it will always close and latch the door. It is noiseless and positive in action, having all the mechanical advantages of the standard LCN surface type closer. *Made in size D-113 only. When ordering be sure to specify hand of door.*

PARALLEL ARM CLOSER

Product No. 119

The LCN Parallel Arm Closer (shown at left) is used where there is not sufficient space between doors for closer to operate with a regular arm. Minimum space required: size C—5"; D—5½"; E—5½".

LCN Parallel Arm Closer, Product No. 137—This closer (not shown) is mounted on a bracket. (Bracket not included in price.)

TELEPHONE BOOTH CLOSER

Product No. 111

The LCN Telephone Booth Closer is also adaptable to use with any door to a closet or small room where continuous ventilation is desired when the space is not occupied. Door closes to within 4" of the latch, and is pulled shut when occupant enters. *Made in size B-111 only. When ordering specify hand of door.*

COUPON BOOTH CLOSER

Product No. 112

May be set by attendant with door ajar, to indicate booth is unoccupied. When released, closes the door, latching it, and operates as a regular door closer until reset by attendant. *Made in size B-112 only. In ordering be sure to specify hand of door.*

LCN EXTRA LONG ARMS

Required where closer is set out on the door farther than usual in order to clear obstructions.

Product No.	A	B	C	D	E	F
125	..	..	13"	13"	..	..
126	..	..	16"	16"	16"	16"
Note—Length, reg. arm						
	8"	9"	9¾"	107/8"	115/8"	115/8"

STANDARD SPECIFICATIONS

U. S. GOVERNMENT MASTER SPECIFICATIONS BUILDERS HARDWARE FF-H-121a COMPARATIVE LCN NUMBERS

Surface Closers			Concealed Floor Closers		
FF-H-121a	Size	LCN No.	FF-H-121	Size	LCN No.
Type 3000.....	I	A	Type 3500.....	II	11
Solid Bronze				III	11X
Case	II	B	Type 3510.....	I	44
Malleable Arms	III	C		II	66
and Brackets	IV	D	Type 3520.....	I	02
	V	E		II	04
Type 3001	V1	F		III	06
Cast iron—Prime			Type 3520A.....	I	12
Coat				II	14
Sizes same as				III	16
above			Type 3525.		
Type 3002			(Intermediate		
Cast Iron—			Pivot)		1
Sprayed finish,					
Sizes same as					
above					

SUGGESTED ARCHITECT'S SPECIFICATIONS

The builder's hardware contractor shall furnish LCN Door Closers as manufactured by the Norton Lasker Company, Chicago, Illinois, of proper size as described in its schedule of sizes.

All Overhead Door Closers (concealed and/or surface types) to have LCN hold-open arms.

STANDARD HARDWARE FINISHES U. S. GOVERNMENT SYMBOLS

U. S. No.
 USP—Primed for painting
 US2C—Cadmium plated
 US3—Bright brass
 US4—Dull brass
 US5—Dull brass, oxidized and relieved
 US6—Sanded brass, oxidized and relieved
 US8—Antique copper
 US9—Bright bronze
 US10—Dull bronze
 US11—Dull bronze, oxidized and relieved
 US12—Sanded bronze, oxidized and relieved
 US14—Nickel plated
 US15—Nickel plated, dull
 US16—Nickel plated, sanded
 US19—Sanded, dull black
 US20—Statuary bronze
 US20A—Statuary bronze, dark
 US21—Statuary bronze, sanded
 US22—Verde antique
 US25—White bronze
 US26—Bright chromium, plated
 US26D—Dull chromium, plated.

GENERAL INFORMATION

All contract installations of LCN Closers are inspected and adjusted by our service department.

Closers can be furnished in any special finish to match samples submitted.

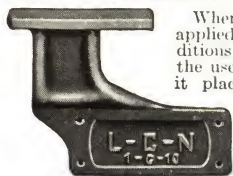
All Closers will be shipped right hand unless otherwise specified.

All Closers packed one in a carton with wrench and screws. Twelve Closers in wooden case.

LCN THE COMPLETE LINE OF CONCEALED AND

ACCESSORIES

SOFFIT BRACKET—Product No. 10



Where opening requires closer applied on a bracket and conditions permit, we recommend the use of the soffit bracket as it places the closer out far enough from the hinge to allow the maximum leverage of arms to control the door.

SIZE OF BASE

A-10	1 3/8" x 3 5/8"	D-10	1 1/8" x 4 3/4"
B-10	1 3/8" x 3 5/8"	E-10	1 1/8" x 5 1/8"
C-10	1 3/8" x 4 1/8"	F-10	1 1/8" x 5 3/8"

CORNER BRACKET—Product No. 11

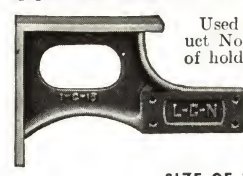


Used where closer is required to swing door 180° only, and where it is necessary to have head room clearance by placing closer in corner of the door frame.

SIZE OF BASE

A-11	1" x 4 1/2"	D-11	1 7/8" x 5 3/8"
B-11	1" x 4 1/2"	E-11	1 3/8" x 5 5/8"
C-11	1 1/4" x 4 1/8"	F-11	1 3/8" x 5 5/8"

CORNER BRACKET—Product No. 16



Used with holder Arm Product No. 123 giving 90° to 140° of hold open. Also with regular arm standard length to 140° of opening. Extra long arms required with this bracket for opening beyond 140°.

SIZE OF BASE

A-16	1" x 5 1/2"	D-16	1 1/4" x 6 1/2"
B-16	1" x 5 1/2"	E-16	1 1/4" x 6 1/2"
C-16	1 1/4" x 6 1/2"	F-16	1 1/4" x 6 1/2"

CORNER BRACKET—Product No. 17

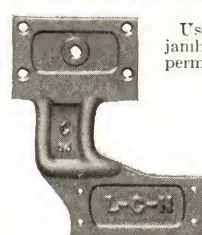


Used where separate Door Holding devices are required. This bracket lowers closer for clearance of closer arms with other Holder Device.

SIZE OF BASE

A-17	Not Made	D-17	1 1/4" x 6 1/2"
B-17	Not Made	E-17	1 1/4" x 6 1/2"
C-17	1 1/4" x 6 1/2"	F-17	1 1/4" x 6 1/2"

FLUSH BRACKET—Product No. 12



Used where head stop and jamb are not wide enough to permit use of the soffit bracket.

SIZE OF BASE

A-12	2 3/8" x 3 1/2"
B-12	2 3/8" x 3 1/2"
C-12	2 1/2" x 4 1/4"
D-12	2 3/4" x 4 3/4"
E-12	2 3/4" x 4 3/4"
F-12	3" x 5"

ADJUSTABLE BRACKET—Product No. 13



Used on outswinging circular top or arch top doors. The base of bracket is adjustable to fit any radius of door frame.

SIZE OF BASE

A-13	1 3/8" x 4"
B-13	1 3/8" x 4"
C-13	2 5/8" x 5"
D-13	2 5/8" x 5"
E-13	2 5/8" x 5"
F-13	2 5/8" x 5"

OFFSET BRACKET—Product No. 14

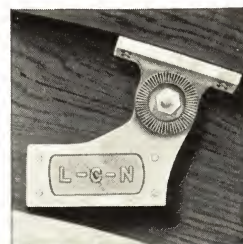


Used on inswinging circular top doors, arch top doors, and recessed doors having a projecting head casing. The base of bracket is adjustable to fit any radius of door stile.

SIZE OF BASE

A-14	3 3/4" Diameter
B-14	3 3/4" "
C-14	3 3/4" "
D-14	3 3/4" "
E-14	3 3/4" "
F-14	3 3/4" "

UNIVERSAL SOFFIT BRACKET—Product No. 15



Used on outswinging arch top doors and is adjustable to fit any spring of arch.

SIZE OF BASE

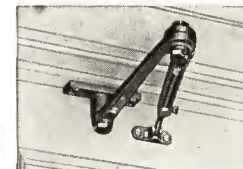
A-15	1 3/8" x 4"
B-15	1 3/8" x 4"
C-15	1 3/8" x 4"
D-15	1 3/8" x 4"
E-15	1 3/8" x 4"
F-15	1 3/8" x 4"

SPECIAL BRACKETS

We are always in a position to make any special brackets required for door closers. Send us details and we will design brackets to overcome any conditions.

All LCN Brackets are made of Malleable Iron.

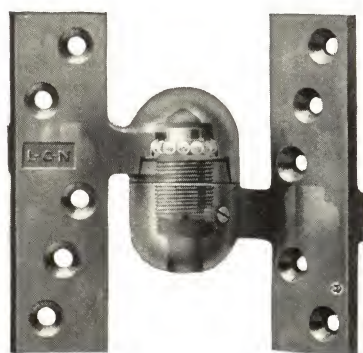
100° HOLD-OPEN ARM WITH SOFFIT POST



Product No. 120

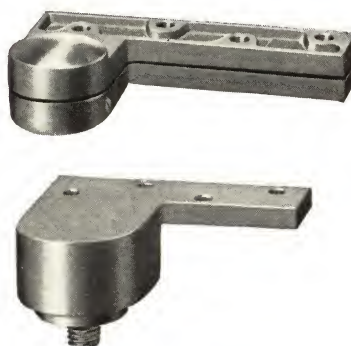
Used in connection with Hold-Open Arm Closer on standing leaf of pair of doors.

LCN BALL-BEARING PIVOTS



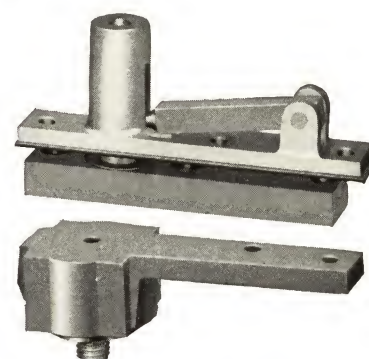
LCN Intermediate Ball-bearing Bronze Pivots Product No. 133

An intermediate or supplementary pivot hinge for use with offset top and bottom pivots. Practically frictionless, and easily adjusted for raising or lowering the door. The entire weight of the door is carried on a hardened combination radial and thrust ball bearing. Pivots are made from a special high grade bronze. In ordering, specify right or left hand.



LCN Offset Type Ball-bearing Bronze Pivots Product No. 148

These pivots furnished as regular equipment with LCN No. 12, 14 and 16 floor type closers. High grade bronze with combination radial and thrust ball bearings. Pivots only, with base plate, available for inactive leaf of doors, or for use wherever pivot mounting is desired with 180-degree opening of door. In ordering, specify right or left hand.



LCN Center Hung Ball-bearing Bronze Pivots Product No. 149

These center hung pivots furnished as regular equipment with LCN No. 02, 04 and 06 floor type closers. High grade bronze with combination radial and thrust ball bearings. Pivots only, with base plate, available for inactive leaf of doors, or for use wherever pivot mounting (invisible) is desired with door opening not to exceed 105 degrees. In ordering, specify right or left hand.

Completely concealed in the head jamb and door, this arrangement of the dependable LCN door closer provides constant control, yet leaves the doorway details unmarred. Full rack-and-pinion checking

mechanism with two-speed closing action easily adjustable. No extra door holders or stops required, as the closer may be had with hold-open feature if desired. Moderate in cost; easy to move, with frame.

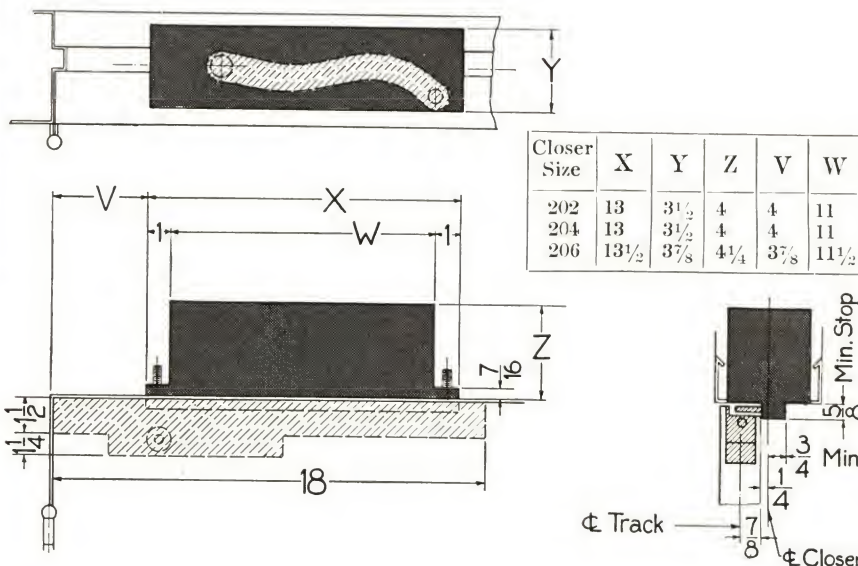
No. 202—For light interior doors not over 3'0" wide.

and vestibule doors over
2'10" wide.

No. 204—For interior doors not over 3'6" wide, for out-swinging entrance and vestibule doors not over 2'10" wide, and for inswinging entrance doors not over 2'6" wide.

Butt hinges not furnished with closer. Surface plate and arm, prime finish for painting. When ordering, specify hand of door, width, height, and thickness, wood or metal. Packed one in carton. Shipping weight No. 202, 32 lbs.; No. 204, 32 lbs.; No. 206, 35 lbs.

No. 206—For extra heavy interior doors not over 4'0" wide, and outside entrance



No. 444—No. 466—Double Acting—Ball Bearing—Door Hung on Center Pivots

For the troublesome problem of getting smooth, positive, full control of double-acting doors in hospitals and other buildings the LCN "444" supplies the practical answer. It (1) allows the door to open easily either way for

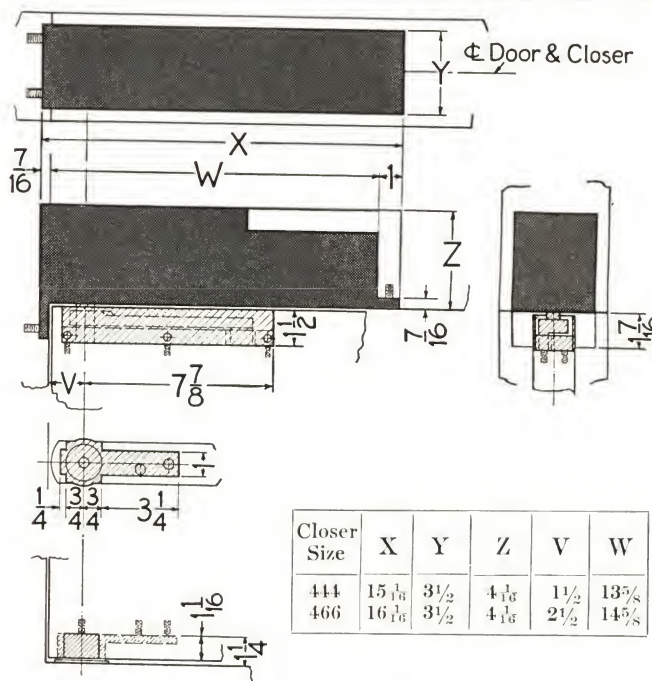
passage of carts, nurses or waitresses with hands full; (2) keeps door under full (rack and pinion) control, preventing sudden slaps; (3) is entirely concealed in the head jamb; (4) over the door, away from scrub water and dirt.

No. 444 — For interior doors not over 3'6", or light vestibule doors not over 2'10" wide.

forged bronze ball bearing pivots. Surface plates prime finish for painting. When ordering specify width, height and thickness of door; wood or metal. Packed one in carton. Shipping weight, No. 444, 24 lbs.; No. 466, 26 lbs.

No. 466—For extra heavy interior doors and outside entrance and vestibule doors.

Furnished with drop



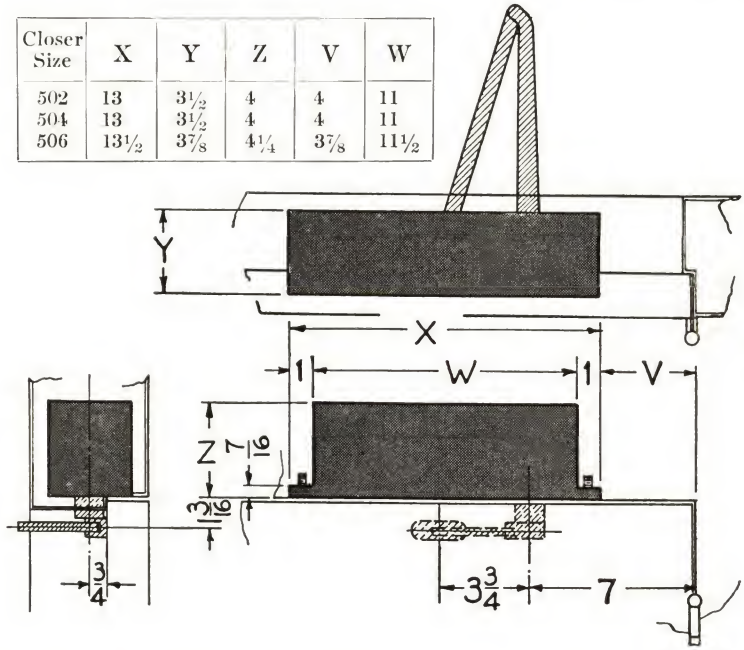
LCN OVERHEAD CONCEALED DOOR CLOSER

No. 502—No. 504—No. 506—Single Acting—Ball Bearing—Door Hung on Butts or Pivots

Mechanism the same as in the 200 series, wholly concealed in the head jamb, but employing a pair of exposed lever arms. Recommended where wind and draft con-

ditions require extra power. No cutting of door or floor, or special thresholds. A very largely concealed device of high efficiency and low cost for installation and upkeep.

Closer Size	X	Y	Z	V	W
502	13	3 1/2	4	4	11
504	13	3 1/2	4	4	11
506	13 1/2	3 7/8	4 1/4	3 7/8	11 1/2



SPECIFICATIONS

No. 502—For light interior doors not over 3'0" wide.

and vestibule doors over 3'4" wide.

No. 504—For interior doors not over 3'8" wide; for out-swinging entrance or vestibule doors not over 3'4" wide; and for inswinging entrance doors not over 3'0" wide.

Butt hinges not furnished with closer. Surface plate and arm, prime finish for painting. When ordering, specify hand of door, width, height and thickness; wood or metal. Packed one in carton. Shipping weight, No. 502, 30 lbs.; No. 504, 30 lbs.; No. 506, 33 lbs.

No. 506—For extra heavy interior doors not over 4'0" wide and outside entrance

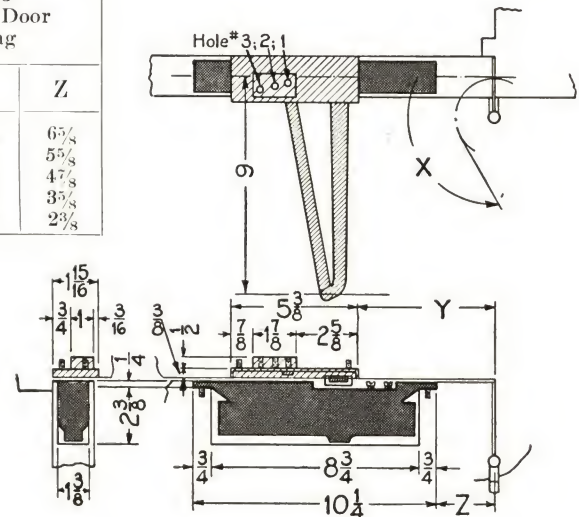
LCN CLOSER CONCEALED-IN-DOOR

No. 302—No. 303—Single Acting—Door Hung on Butts

This type meets the wide demand for a concealed closer to be used with light to medium weight interior doors. Only the flat steel arm is visible. Efficient, simple to install in metal or wooden doors, the latter not less than 1 3/4 in.

thick. Especially good with flush-type partition work. Full rack-and-pinion mechanism with two-speed adjustable action in closing and latching. Furnished with or without hold-open feature. Concealed control at low cost.

302-303 Degree of Door Opening		
X	Y	Z
90°	9 7/8	6 5/8
110°	8 7/8	5 5/8
130°	8 1/8	4 7/8
150°	6 7/8	3 3/8
180°	5 5/8	2 3/8



SPECIFICATIONS

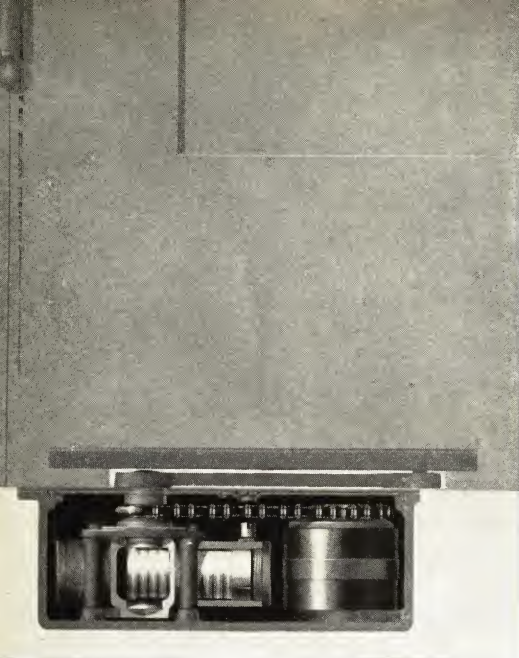
No. 302—For light interior residence doors, not less than 1 3/4".

prime finish for painting or standard LCN finishes.

No. 303—For inside doors 3'x7', not less than 1 3/4".

When ordering, specify the hand of door, width, height, and thickness, wood or metal. Packed one in carton. Shipping weight, No. 302, 5 lbs.; No. 303, 5 lbs.

Butt hinges not furnished with closer. Exposed parts in



SPECIFICATIONS

No. 2—For light interior doors not over 3'0" wide, and vestibule doors over 2'10" wide.

No. 4—For interior doors not over 3'6" wide, for out-swinging entrance and vestibule doors not over 2'10" wide, and inswinging entrance doors not over 2'6" wide.

No. 6—For extra heavy interior doors not over 4'0" wide, and outside entrance

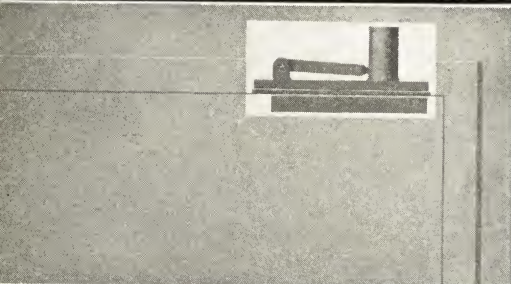
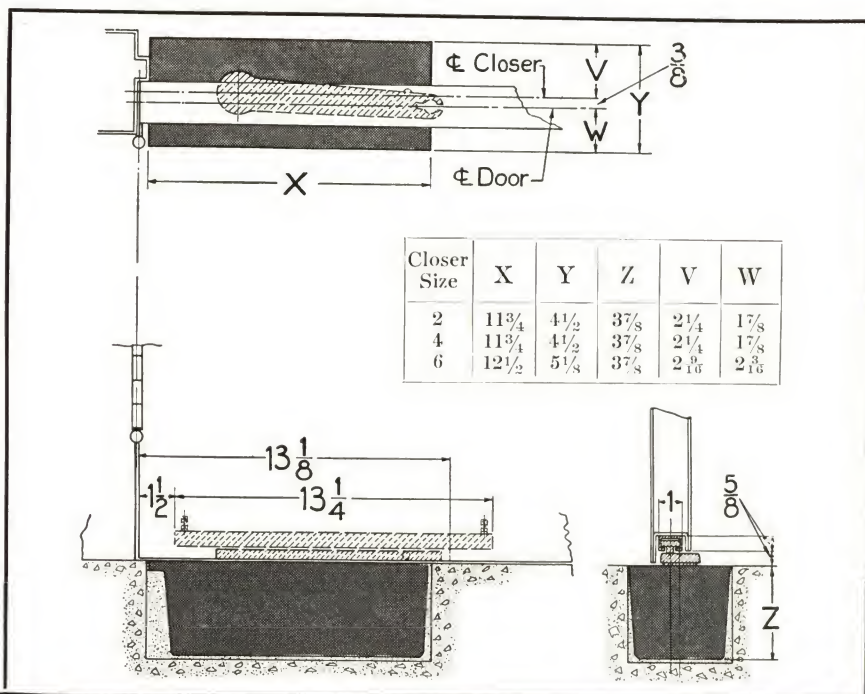
doors not over 2'10" wide. Butt hinges not furnished with closer. Exposed parts furnished brass or bronze, dull or polished. When ordering, specify hand of door, width, height and thickness, wood or metal. Packed one in carton. Shipping weight No. 2, 27 lbs.; No. 4, 30 lbs.; No. 6, 37 lbs.

LCN CLOSER CONCEALED IN FLOOR

No. 2—No. 4—No. 6—Single Acting—Ball Bearing—Door Hung on Butts

This type of closer is entirely concealed in the floor. The power is efficiently applied by a lever arm which operates in connection with a track concealed in the door. Entire weight of door is borne independently of closer,

by regular butt, hinge plate or strap hinges. Location of closer shaft and power application well out from hinge side yield effectiveness far higher than in older types of floor closers. Position does not require offset threshold.



SPECIFICATIONS

No. 02—For light interior doors not over 3'0" wide.

No. 04—For interior doors not over 3'6" wide, for out-swinging entrance and vestibule doors not over 2'10" wide, and inswinging entrance doors not over 2'6" wide.

No. 06—For extra heavy interior doors not over 4'0" wide, and outside entrance and vestibule doors over 2'10" wide.

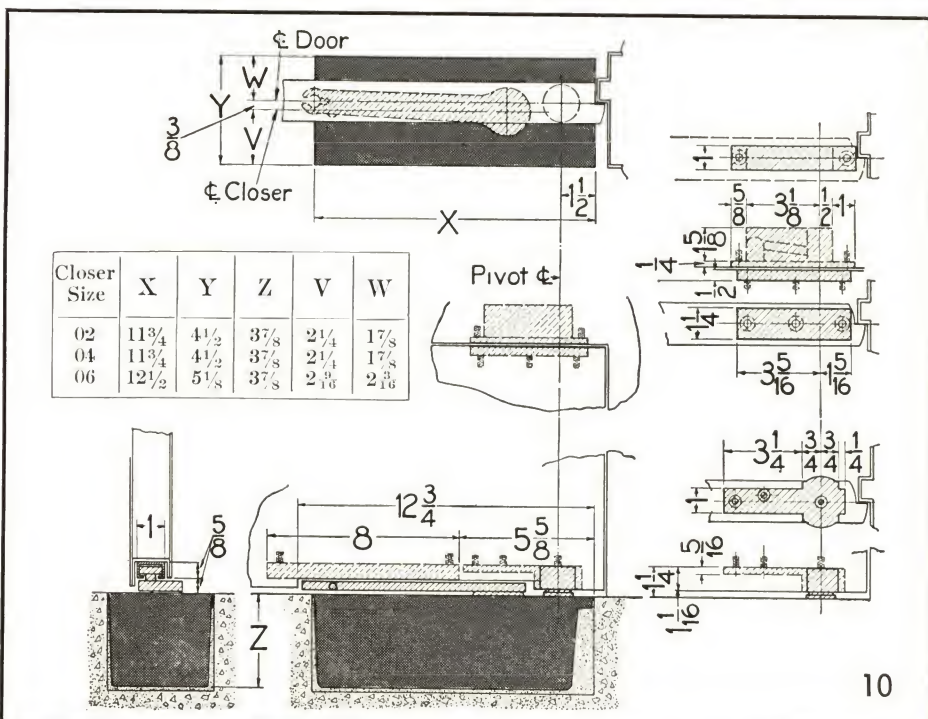
Furnished with drop forged bronze ball bearing pivots top and bottom. Exposed parts furnished brass or bronze, dull or polished. When ordering specify hand of door, width, height and thickness, wood or metal. Packed one in carton. Shipping weight No. 02, 27 lbs.; No. 04, 30 lbs.; No. 06, 37 lbs.

LCN CLOSER CONCEALED IN FLOOR

No. 02—No. 04—No. 06—Single Acting—Ball Bearing

Where floor type closers are desired and doors cannot be hung from the jamb, this LCN closer will be found highly effective. For doors without mullions; for work where maximum space for traffic is essential. Door hung on bronze ball bearing

center pivots, furnished with closer. Weight of door not carried on closer mechanism, but on rigid case. Location of closer and application of power by lever yield efficiency. No offset threshold required, due to position of closer near door center line.



LCN CLOSER CONCEALED IN FLOOR

No. 12—No. 14—No. 16—Single Acting—Ball Bearing

Where floor type concealed closers are desired, and doors are to be hung on offset pivots, this LCN closer with be found highly satisfactory. Furnished complete with top and bottom bronze offset pivots

with ball bearings. Closer applies power with lever arm, and is located for effective work. Weight of door is borne not by mechanism, but by rigid case. No offset threshold required.

SPECIFICATIONS

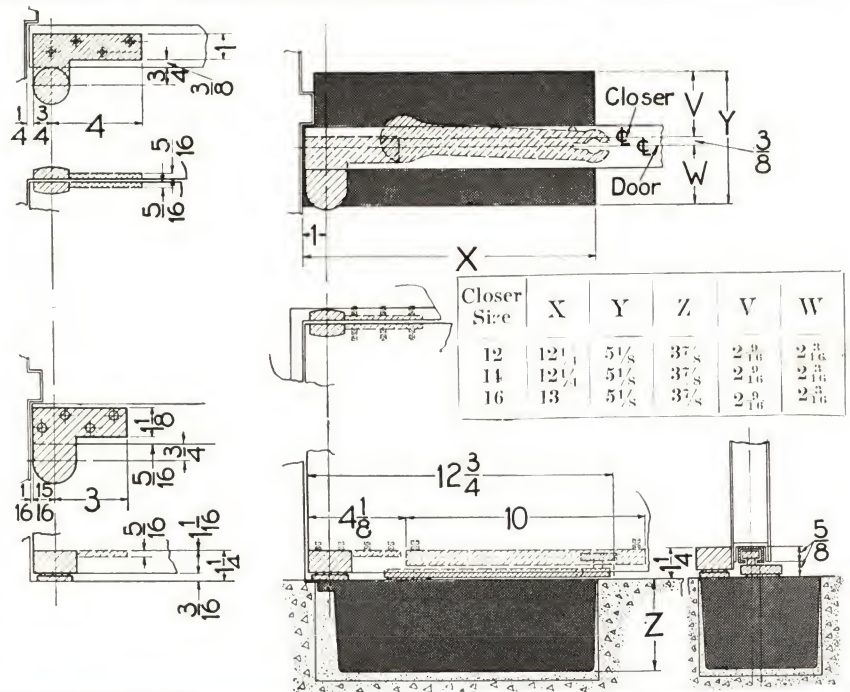
No. 12—For light interior doors not over 3'0" wide.

and vestibule doors over 2'10" wide.

No. 14—For interior doors not over 3'6" wide, for out-swinging entrance and vestibule doors not over 2'10" wide, and for inswinging entrance doors not over 2'6" wide.

Furnished with drop forged bronze ball bearing pivots. Exposed parts furnished brass or bronze, dull or polished. When ordering specify hand of door, width, height and thickness, wood or metal. Packed one in carton. Shipping weight No. 12, 27 lbs.; No. 14, 30 lbs.; No. 16, 37 lbs.

No. 16—For extra heavy interior doors not over 4'0" wide, and outside entrance



LCN CLOSER CONCEALED IN FLOOR

No. 44—No. 66—Double Acting—Door Hung on Center Pivots

In the LCN Floor type Concealed Closer for double acting doors, concealed center hung ball bearing pivots are furnished. This closer has two separate checking cylinders and two separate coils. Each can be adjusted independently of the other so

that the proper amount of checking control and power can be secured for each direction the door swings. The bottom pivot mounted on the closer box carries the weight of the door and not the spindle of the checking device.

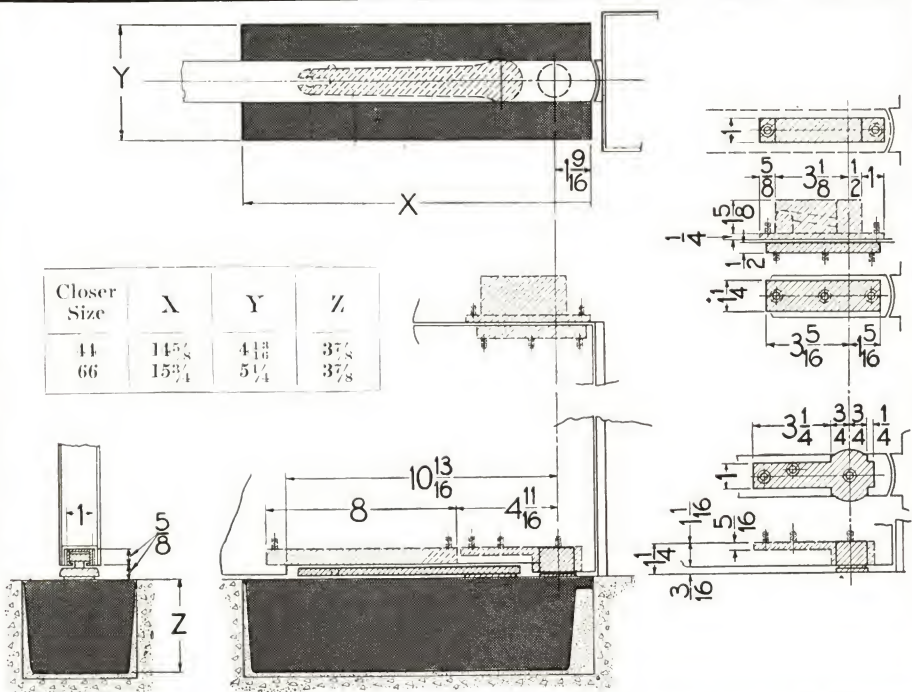
SPECIFICATIONS

No. 44—For heavy interior doors not over 3'6", or light vestibule doors not over 2'10" wide.

No. 66—For extra heavy interior doors and outside entrance and vestibule doors.

Furnished with drop forged

bronze ball bearing pivots. Exposed parts furnished brass or bronze, dull or polished. When ordering specify width, height and thickness of door, wood or metal. Packed one in carton. Shipping weight, No. 44, 45 lbs.; No. 66, 50 lbs.





*... from the start
designed and manufactured by
an organization of specialists*

This company, from the start, has devoted all its efforts and the facilities of a modern manufacturing plant to the job of producing door closers. The object has been to work out the practical answer to every door control problem with which the architect, the builder and the building superintendent have to deal, and to make LCNs the most efficient, reliable and economical door closers it is possible to build. We welcome inquiries of an kind in this field. Write, phone or wire the home office or our nearest representative.

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BOSTON—C. E. Harris Co., 99 Bedford St.

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BUFFALO—Wm. R. Luxford, Pinehurst, Lake View, N. Y.

PITTSBURGH—E. D. Randolph, 817 Washington Drive (Mail: Box 6332, N. S. Sta.)

HARRISBURG—C. H. Speers, 208 W. Maplewood Ave., Mechanicsburg, Pa.

PHILADELPHIA—J. E. Leonard, 2402 Market St.

MARYLAND-VIRGINIA—J. J. McDonald, 19 Elm Ave., Takoma Park, Md. (Mail: Box 4301, Washington, D. C.)

CHARLOTTE, N. C.—L. E. Waldron, 404 Hermitage Court (Mail: Box 4010, Elizabeth Sta.)

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PORTLAND—J. C. Hertsche, 3707 N. E. 24th Ave.

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NORTON LASIER COMPANY



466 WEST SUPERIOR STREET

CHICAGO, ILLINOIS